

Indexing 5 09/339,818

Crane 09/339,818

June 21, 2004

4/8

L7 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 2000:34909 HCAPLUS  
 DOCUMENT NUMBER: 32:94914  
 ENTRY DATE: Entered STN: 14 Jan 2000  
 TITLE: Preparation of linear cyclodextrin copolymers  
 INVENTOR(S): Gonzalez, Hector; Hwang, Suzie Sue  
 Jean; Davis, Mark E.  
 PATENT ASSIGNEE(S): California Institute of Technology, USA  
 SOURCE: PCT Int. Appl., 84 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 INT. PATENT CLASSIF.:  
 MAIN: C08B037-16  
 SECONDARY: C08G081-00; C08G069-00; C08G069-40; C08G073-02;  
 C08G073-06; C08G075-00; A61K047-40  
 CLASSIFICATION: 44-6 (Industrial Carbohydrates)  
 Section cross-reference(s): 63  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000001734	A1	20000113	WO 1999-US14298	19990625
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6509323	B1	20030121	US 1998-203556	19981202
CA 2336390	AA	20000113	CA 1999-2336390	19990625
AU 9948305	A1	20000124	AU 1999-48305	19990625
AU 763114	B2	20030710		
EP 1093469	A1	20010425	EP 1999-931889	19990625
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9911754	A	20011106	BR 1999-11754	19990625
JP 2002519482	T2	20020702	JP 2000-558134	19990625
US 2002151523	A1	20021017	US 2002-97326	20020315
PRIORITY APPLN. INFO.:				
			US 1998-91550P	P 19980701
			US 1998-203556	A 19981202
			US 1999-339818	A3 19990625
			WO 1999-US14298	W 19990625

## ABSTRACT:

Linear cyclodextrin copolymers containing an unoxidized and/or an oxidized cyclodextrin moiety integrated into the polymer backbone, useful as drug delivery vehicles, were prepared. For example, substitution reaction of 6A,6D-diiodo-6A,6D-deoxy- $\beta$ -cyclodextrin (2-step preparation by a known procedure given) with NaSCH<sub>2</sub>CH<sub>2</sub>NH<sub>2</sub> gave 79% 6A,6D-bis(2-aminoethylthio)-6A6D-deoxy- $\beta$ -cyclodextrin. This was stirred for 18 h at 80° in DMF under N with an equiv of MeOC(:NH)(CH<sub>2</sub>)<sub>6</sub>C(:NH)OMe-2HCl in the presence of Et<sub>3</sub>N

to give 18% of a title copolymer (CD copolymer). Media containing doxorubicin and CD copolymer-doxorubicin complex (general complexation procedure given) were applied to cultured cell lines to show no toxicity to KB or KB-VI cell lines in the absence of doxorubicin.

SUPPL. TERM: cyclodextrin linear copolymer prepn drug delivery;  
iododeoxycyclodextrin prepn substitution  
 aminoethylthiocyclodextrin; aminoethylthiocyclodextrin prepn  
 polymn dimethylsuberimide; doxorubicin complex  
 aminoethylthiocyclodextrin dimethylsuberimide copolymer  
 cell toxicity

INDEX TERM: Drug delivery systems  
 (preparation of linear cyclodextrin copolymers as)

INDEX TERM: 51178-68-8  
 ROLE: RCT (Reactant); RACT (Reactant or reagent)  
 (acid chlorination; preparation of linear cyclodextrin  
 copolymers as drug delivery agents)

INDEX TERM: 91190-86-2P  
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation and conversion to diodo derivative; preparation  
 of linear  
 cyclodextrin copolymers as drug delivery agents)

INDEX TERM: ~~35625-91-3P~~  
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation and copolymn. with diaminocyclodextrin;  
 preparation of  
 linear cyclodextrin copolymers as drug delivery agents)

INDEX TERM: 101652-40-8P 254912-03-3P  
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation and copolymn.; preparation of linear cyclodextrin  
 copolymers as drug delivery agents)

INDEX TERM: 98126-99-9P  
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation and redn to diamine; preparation of linear  
 cyclodextrin copolymers as drug delivery agents)

INDEX TERM: 76700-72-6P  
 ROLE: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (preparation and substitution with sodium azide; preparation  
 of  
 linear cyclodextrin copolymers as drug delivery agents)

INDEX TERM: 23214-92-8DP, Doxorubicin, complexes with cyclodextrin  
 copolymers  
 ROLE: BSU (Biological study, unclassified); PNU  
 (Preparation, unclassified); BIOL (Biological study); PREP  
 (Preparation)  
 (preparation of linear cyclodextrin copolymers as drug  
 delivery agents)

INDEX TERM: 254912-04-4P 254912-05-5DP, oxidized 254912-05-5P  
 254912-07-7P 254912-08-8P 254912-09-9P 254912-10-2P  
 254912-11-3P  
 ROLE: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of linear cyclodextrin copolymers as drug

delivery agents)  
INDEX TERM: 7585-39-9,  $\beta$ -Cyclodextrin  
ROLE: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with biphenyldisulfonyl dichloride; preparation of  
linear cyclodextrin copolymers as drug delivery agents)  
INDEX TERM: 3406-84-6, Biphenyl-4,4'-disulfonyl chloride  
ROLE: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with  $\beta$ -cyclodextrin; preparation of linear  
cyclodextrin copolymers as drug delivery agents)  
INDEX TERM: 51974-68-6, Sodium 2-aminoethylthiolate  
ROLE: RCT (Reactant); RACT (Reactant or reagent)  
(thioetherification of diiodocyclodextrin; preparation of  
linear cyclodextrin copolymers as drug delivery agents)  
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS  
RECORD.  
REFERENCE(S): (1) Showa Denko Kk; JP 04106101 A 1992 HCAPLUS  
(2) Toppan Printing Co Ltd; EP 0502194 A 1992 HCAPLUS

L8 ANSWER 1 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 254912-11-3 REGISTRY  
CN  $\beta$ -Cyclodextrin, 6A,6D-bis-S-(2-aminoethyl)-6A,6D-dithio-, polymer  
with dimethyl octanediimide dihydrochloride (9CI) (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Octanediimide acid, dimethyl ester, dihydrochloride, polymer with  
6A,6D-bis-S-(2-aminoethyl)-6A,6D-dithio- $\beta$ -cyclodextrin (9CI)  
FS STEREOSEARCH  
MF (C46 H80 N2 O33 S2 . C10 H20 N2 O2 . 2 Cl H)x  
CI PMS  
PCT Polyazomethine, Polyazomethine formed, Polythioether  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
DT.CA Caplus document type: Journal; Patent  
RL.P Roles from patents: PREP (Preparation)  
RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation);  
PROC (Process); PRP (Properties); USES (Uses)  
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
study); PREP (Preparation); USES (Uses)

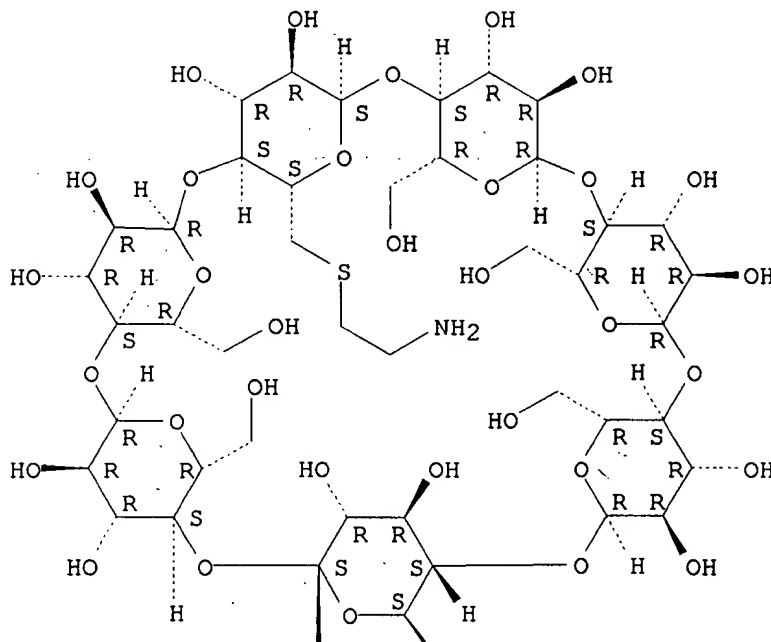
CM 1

CRN 101652-40-8

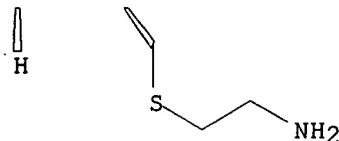
CMF C46 H80 N2 O33 S2

Absolute stereochemistry.

PAGE 1-A



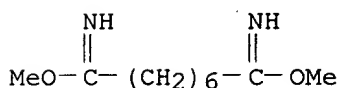
PAGE 2-A



CM 2

CRN 34490-86-3 (29878-26-0)

CMF C10 H20 N2 O2 . 2 Cl H



● 2 HCl

6 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

6 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 2 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 254912-10-2 REGISTRY

CN  $\beta$ -Cyclodextrin, 6A,6D-bis-S-(2-aminoethyl)-6A,6D-dithio-, polymer with dimethyl 3,3'-dithiobis[propanimidate] dihydrochloride (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, dihydrochloride, polymer with 6A,6D-bis-S-(2-aminoethyl)-6A,6D-dithio- $\beta$ -cyclodextrin (9CI)

FS STEREOSEARCH

MF (C46 H80 N2 O33 S2 . C8 H16 N2 O2 S2 . 2 Cl H)x

CI PMS

PCT Polyazomethine, Polyazomethine formed, Polysulfide, Polythioether

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA Caplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation)

RL.NP Roles from non-patents: BIOL (Biological study); PREP (Preparation); USES (Uses)

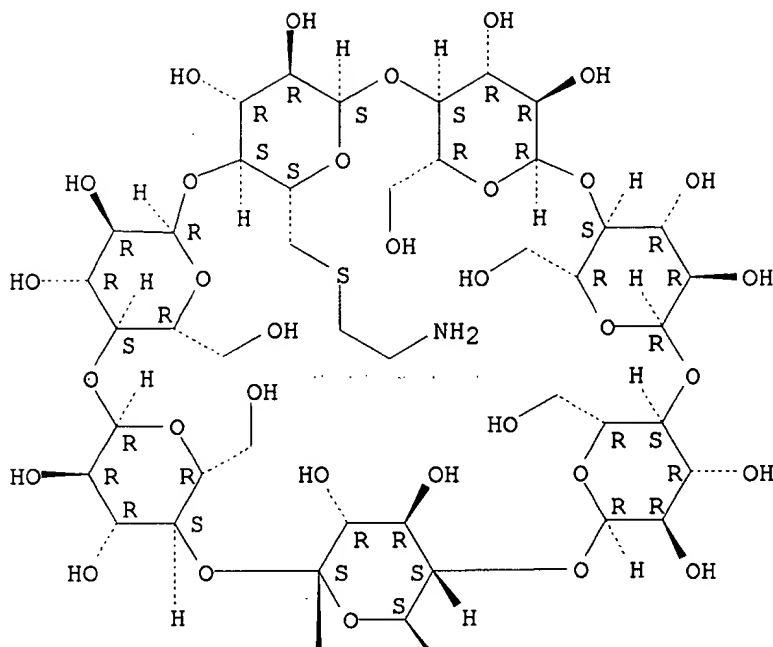
CM 1

CRN 101652-40-8

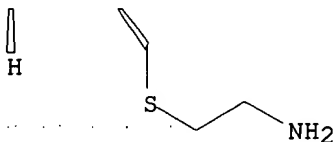
CMF C46 H80 N2 O33 S2

Absolute stereochemistry.

PAGE 1-A



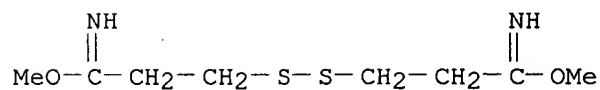
PAGE 2-A



CM 2

CRN 38285-78-8 (59012-54-3)

CMF C8 H16 N2 O2 S2 . 2 Cl H



● 2 HCl

2 REFERENCES IN FILE CA (1907 TO DATE)

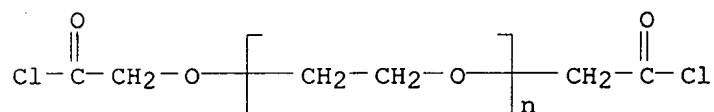
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 3 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 254912-09-9 REGISTRY  
 CN  $\beta$ -Cyclodextrin, 6A,6D-diamino-6A,6D-dideoxy-, carbonate (1:2),  
 polymer with  $\alpha$ -(2-chloro-2-oxoethyl)- $\omega$ -(2-chloro-2-oxoethoxy)poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-chloro-2-oxoethyl)- $\omega$ -(2-chloro-2-oxoethoxy)-, polymer with 6A,6D-diamino-6A,6D-dideoxy- $\beta$ -cyclodextrin carbonate (1:2) (9CI)  
 FS STEREOSEARCH  
 DR 275354-48-8  
 MF (C42 H72 N2 O33 . (C2 H4 O)n C4 H4 Cl2 O3 . 2 C H2 O3)x  
 CI PMS  
 PCT Polyamide, Polyamide formed, Polycarbonate, Polycarbonate formed, Polyester, Polyester formed, Polyether, Polyurea, Polyurea formed  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
 DT.CA Caplus document type: Patent  
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

CM 1

CRN 35625-91-3  
 CMF (C2 H4 O)n C4 H4 Cl2 O3  
 CCI PMS



CM 2

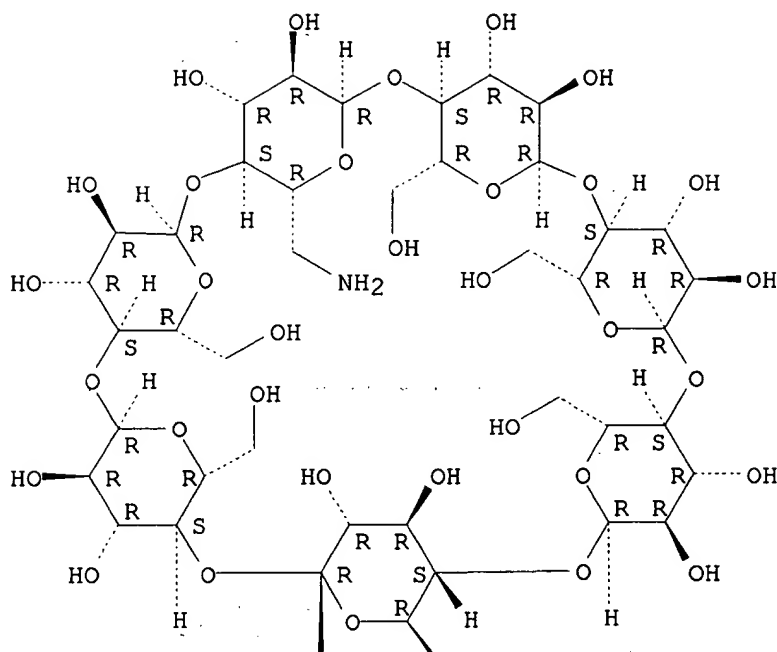
CRN 254912-03-3  
 CMF C42 H72 N2 O33 . 2 C H2 O3

CM 3

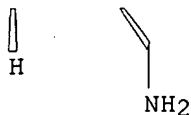
CRN 162825-08-3  
 CMF C42 H72 N2 O33

Absolute stereochemistry.

PAGE 1-A



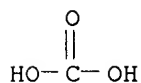
PAGE 2-A



CM 4

CRN 463-79-6

CMF C H2 O3



3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 4 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 254912-08-8 REGISTRY

CN  $\beta$ -Cyclodextrin, 6A,6D-diazo-6A,6D-dideoxy-, polymer with  
2,2'-dithiobis[ethanamine] dihydrochloride (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Ethanamine, 2,2'-dithiobis-, dihydrochloride, polymer with



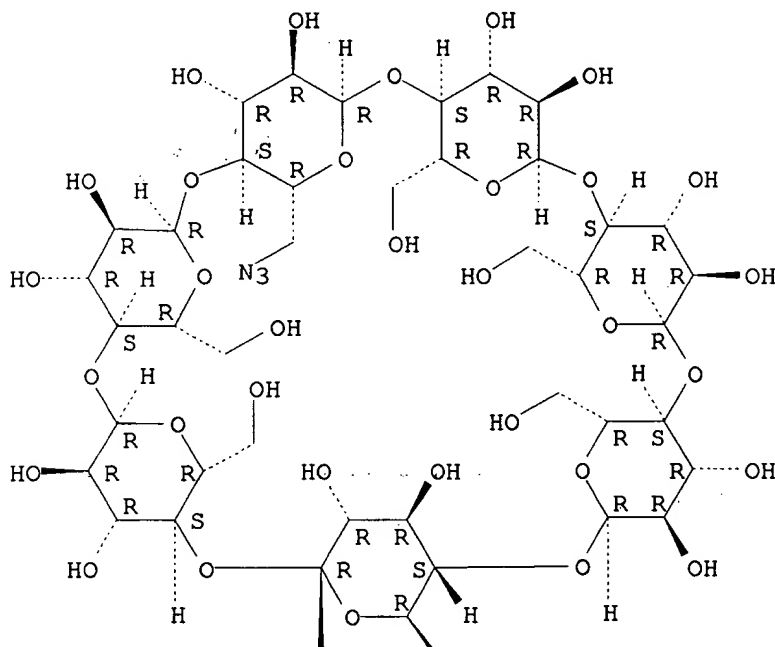
6A,6D-diazido-6A,6D-dideoxy- $\beta$ -cyclodextrin (9CI)  
FS STEREOSEARCH  
MF (C42 H68 N6 O33 . C4 H12 N2 S2 . 2 Cl H)x  
CI PMS  
PCT Polyother  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
DT.CA Caplus document type: Patent  
RL.P Roles from patents: PREP (Preparation)

CM 1

CRN 98126-99-9  
CMF C42 H68 N6 O33

Absolute stereochemistry.

PAGE 1-A



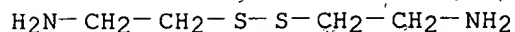
PAGE 2-A



CM 2

CRN 56-17-7 (51-85-4)

CMF C4 H12 N2 S2 . 2 Cl H



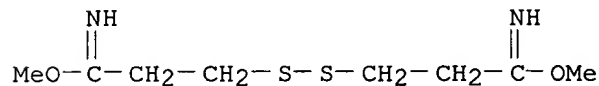
●2 HCl

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 5 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 254912-07-7 REGISTRY  
CN β-Cyclodextrin, 6A,6D-diamino-6A,6D-dideoxy-, carbonate (1:2),  
polymer with dimethyl 3,3'-dithiobis[propanimidate] dihydrochloride (9CI)  
(CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Propanimidic acid, 3,3'-dithiobis-, dimethyl ester, dihydrochloride,  
polymer with 6A,6D-diamino-6A,6D-dideoxy-β-cyclodextrin carbonate  
(1:2) (9CI)  
FS STEREOSEARCH  
MF (C42 H72 N2 O33 . C8 H16 N2 O2 S2 . 2 C H2 O3 . 2 Cl H)x  
CI PMS  
PCT Polyazomethine, Polyazomethine formed, Polycarbonate, Polycarbonate  
formed, Polysulfide, Polyurea, Polyurea formed  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
DT.CA Caplus document type: Patent  
RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT  
(Reactant or reagent); USES (Uses)

CM 1

CRN 38285-78-8 (59012-54-3)  
CMF C8 H16 N2 O2 S2 . 2 Cl H



●2 HCl

CM 2

CRN 254912-03-3  
CMF C42 H72 N2 O33 . 2 C H2 O3

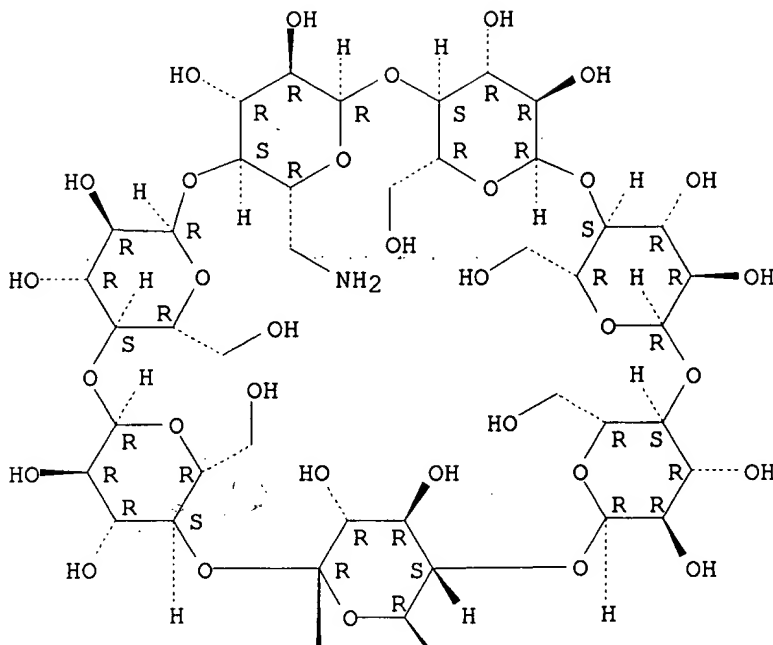
CM 3

CRN 162825-08-3

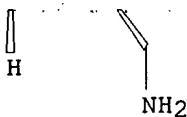
CMF C42 H72 N2 O33

Absolute stereochemistry..

PAGE 1-A



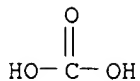
PAGE 2-A



CM 4

CRN 463-79-6

CMF C H2 O3



3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 6 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 254912-05-5 REGISTRY

CN  $\beta$ -Cyclodextrin, 6A,6D-diamino-6A,6D-dideoxy-, carbonate (1:2), polymer with 1,1'-[(1,8-dioxo-1,8-octanediyl)bis(oxy)]bis[2,5-pyrrolidinedione] (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,5-Pyrrolidinedione, 1,1'-[(1,8-dioxo-1,8-octanediyl)bis(oxy)]bis-, polymer with 6A,6D-diamino-6A,6D-dideoxy- $\beta$ -cyclodextrin carbonate (1:2) (9CI)

FS STEREOSEARCH

MF (C42 H72 N2 O33 . C16 H20 N2 O8 . 2 C H2 O3)x

CI PMS

PCT Polyamide, Polyamide formed, Polycarbonate, Polycarbonate formed, Polyurea, Polyurea formed

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

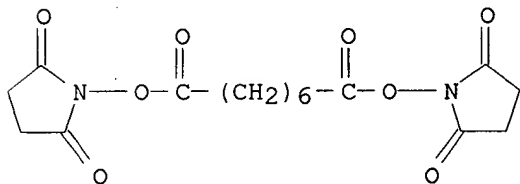
DT.CA Caplus document type: Patent

RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

CRN 68528-80-3  
CMF C16 H20 N2 O8



CM 2

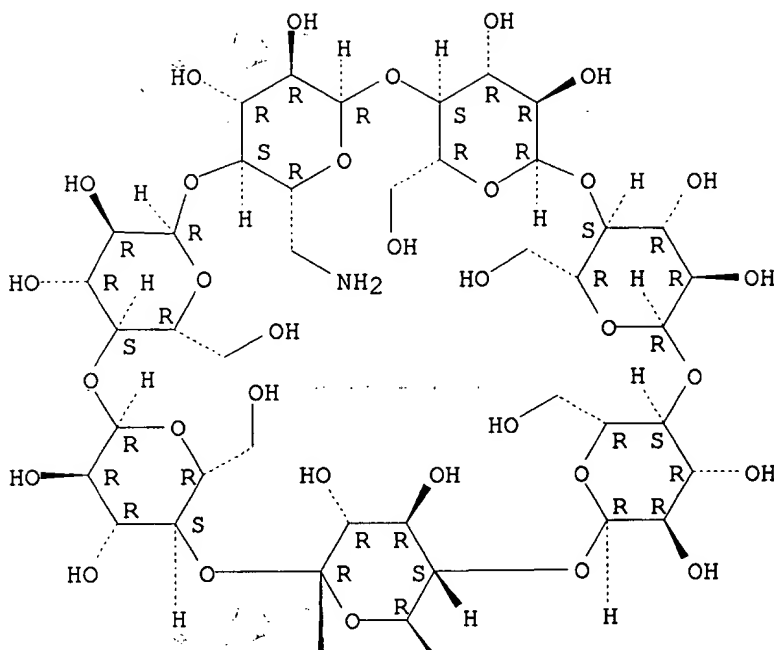
CRN 254912-03-3  
CMF C42 H72 N2 O33 . 2 C H2 O3

CM 3

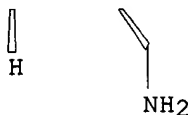
CRN 162825-08-3  
CMF C42 H72 N2 O33

Absolute stereochemistry.

PAGE 1-A



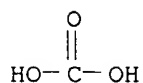
PAGE 2-A



CM 4

CRN 463-79-6

CMF C H2 O3



3 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 7 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 254912-04-4 REGISTRY  
 CN  $\beta$ -Cyclodextrin, 6A,6D-diamino-6A,6D-dideoxy-, carbonate (1:2),  
 polymer with 1,1'-[dithiobis[(1-oxo-3,1-propanediyl)oxy]]bis[2,5-  
 pyrrolidinedione] (9CI) (CA INDEX NAME)

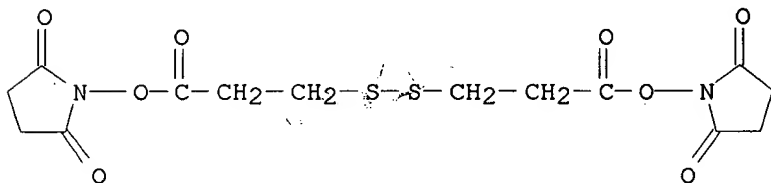
## OTHER CA INDEX NAMES:

CN 2,5-Pyrrolidinedione, 1,1'-[dithiobis[(1-oxo-3,1-propanediyl)oxy]]bis-,  
polymer with 6A,6D-diamino-6A,6D-dideoxy- $\beta$ -cyclodextrin carbonate  
(1:2) (9CI)  
FS STEREOSEARCH  
MF (C42 H72 N2 O33 . C14 H16 N2 O8 S2 . 2 C H2 O3)x  
CI PMS  
PCT Polyamide, Polyamide formed, Polycarbonate, Polycarbonate formed,  
Polysulfide, Polyurea, Polyurea formed  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
DT.CA Caplus document type: Patent  
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

CRN 57757-57-0

CMF C14 H16 N2 O8 S2



CM 2

CRN 254912-03-3

CMF C42 H72 N2 O33 . 2 C H2 O3

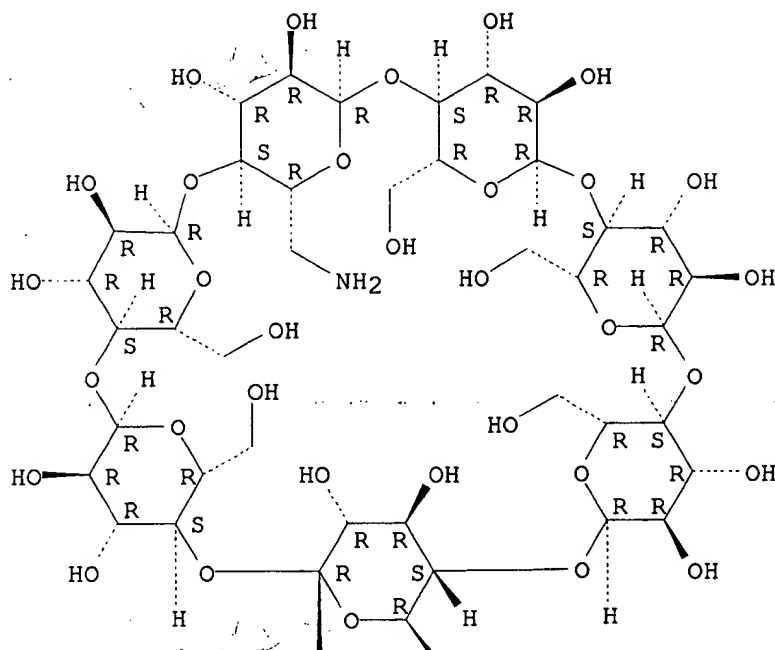
CM 3

CRN 162825-08-3

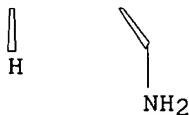
CMF C42 H72 N2 O33

Absolute stereochemistry.

PAGE 1-A



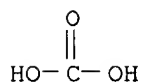
PAGE 2-A



CM 4

CRN 463-79-6

CMF C H2 O3



3 REFERENCES IN FILE CA (1907 TO DATE)  
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 8 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 254912-03-3 REGISTRY

CN  $\beta$ -Cyclodextrin, 6A,6D-diamino-6A,6D-dideoxy-, carbonate (1:2) (9CI)  
 (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Carbonic acid, compd. with 6A,6D-diamino-6A,6D-dideoxy- $\beta$ -cyclodextrin

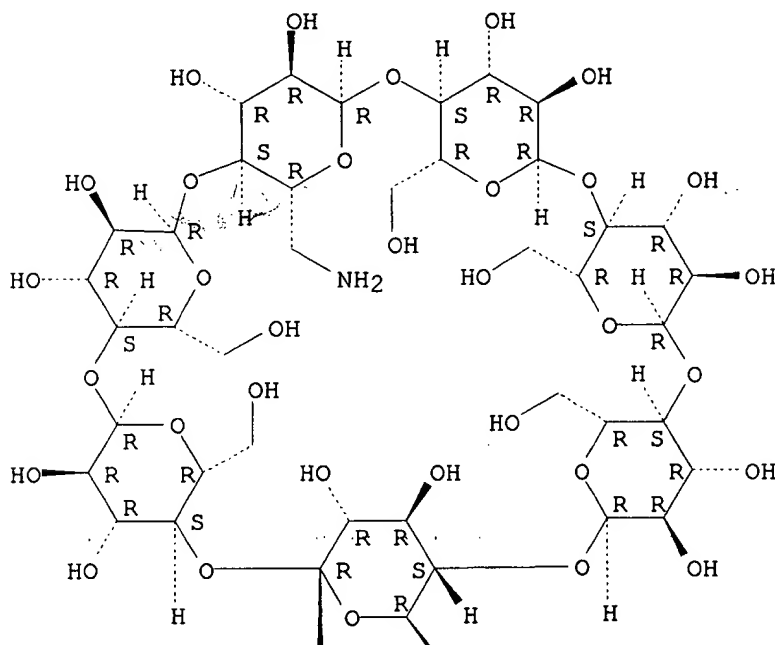
(2:1) (9CI)  
FS STEREOSEARCH  
MF C42 H72 N2 O33 . 2 C H2 O3  
CI COM  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL  
DT.CA CPlus document type: Patent  
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)

CM 1

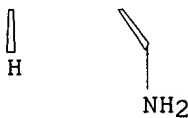
CRN 162825-08-3  
CMF C42 H72 N2 O33

Absolute stereochemistry.

PAGE 1-A



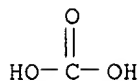
PAGE 2-A



CM 2

CRN 463-79-6  
CMF C H2 O3



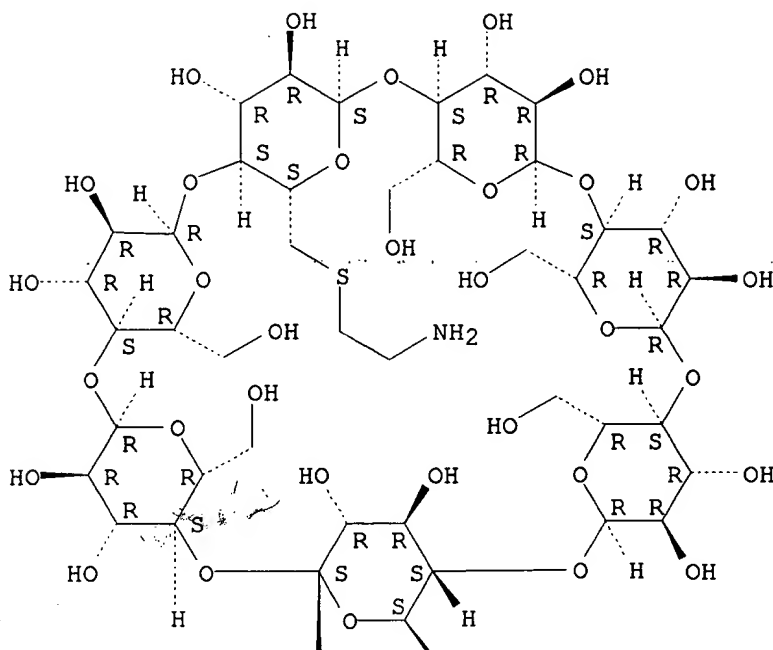


3 REFERENCES IN FILE CA (1907 TO DATE)  
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

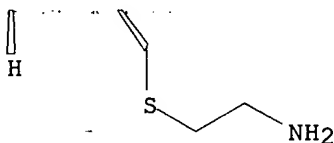
L8 ANSWER 9 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 101652-40-8 REGISTRY  
CN  $\beta$ -Cyclodextrin, 6A,6D-bis-S-(2-aminoethyl)-6A,6D-dithio- (9CI) (CA  
INDEX NAME)  
OTHER CA INDEX NAMES:  
CN 2,4,7,9,12,14,17,19,22,24,27,29,32,34-Tetradecaaxaoctacyclo[31.2.2.23,6.28  
,11.213,16.218,21.223,26.228,31]nonatetracontane,  $\beta$ -cyclodextrin  
deriv.  
FS STEREOSEARCH  
MF C46 H80 N2 O33 S2  
CI COM  
SR CA  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)  
DT.CA CAplus document type: Journal; Patent  
RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); PREP (Preparation); USES (Uses)  
RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)  
RLD.NP Roles for non-specific derivatives from non-patents: BIOL (Biological  
study); PREP (Preparation); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

9 REFERENCES IN FILE CA (1907 TO DATE)  
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 10 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 98126-99-9 REGISTRY

CN  $\beta$ -Cyclodextrin, 6A,6D-diazo-6A,6D-dideoxy- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,4,7,9,12,14,17,19,22,24,27,29,32,34-Tetradecaaxaoctacyclo[31.2.2.23,6.28,11.213,16.218,21.223,26.228,31]nonatetracontane,  $\beta$ -cyclodextrin deriv.

OTHER NAMES:

CN 6A,6D-Diazo-6A,6D-dideoxy- $\beta$ -cyclodextrin

FS STEREOSEARCH

MF C42 H68 N6 O33

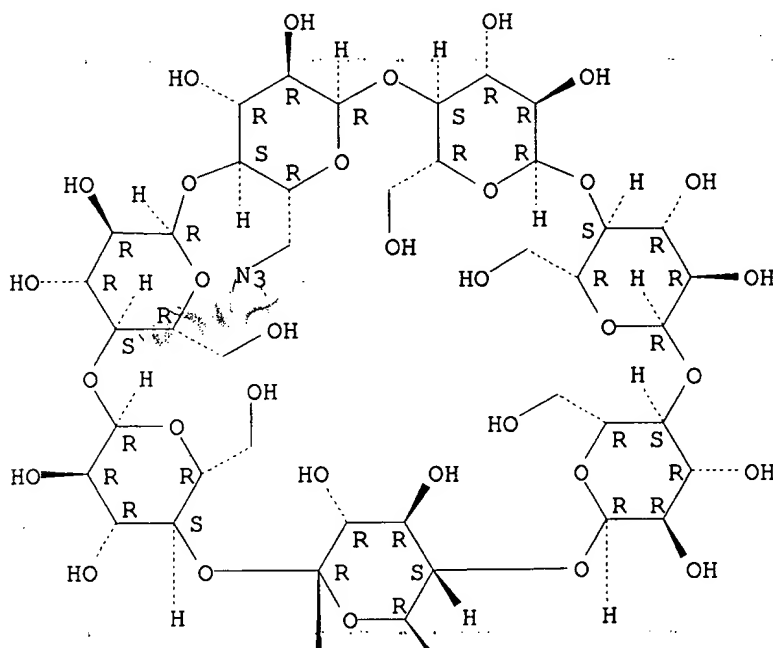
CI COM

SR CA

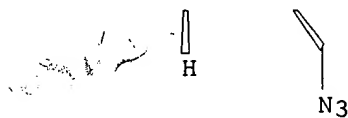
LC STN Files: BELLSTEIN\*, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 DT.CA Caplus document type: Journal; Patent  
 RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)  
 RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)

Absolute stereochemistry.

PAGE 1-A



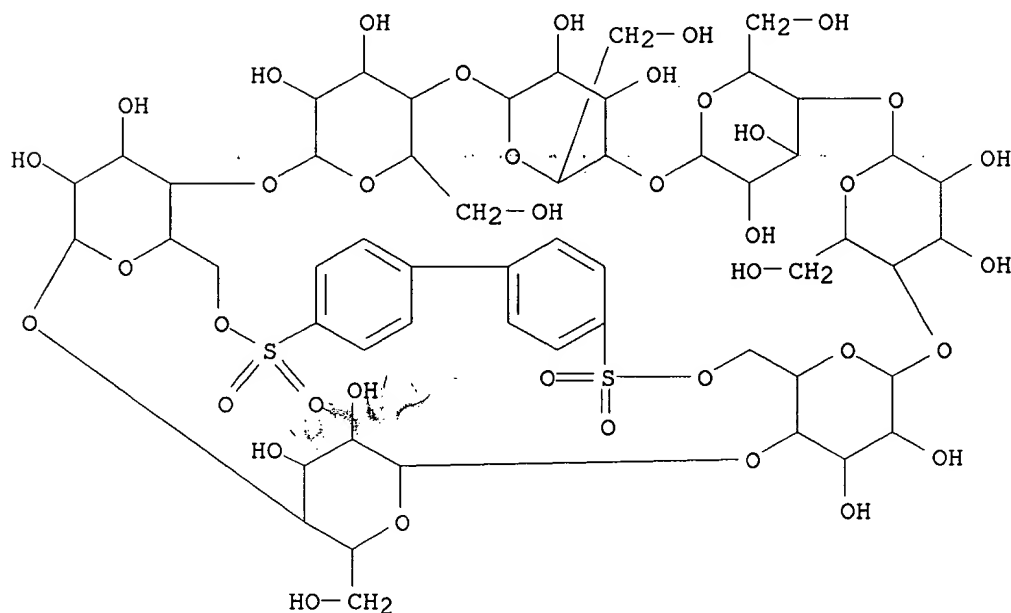
PAGE 2-A



9 REFERENCES IN FILE CA (1907 TO DATE)  
 9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 11 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 91190-86-2 REGISTRY  
 CN  $\beta$ -Cyclodextrin, cyclic 6A,6C-[1,1'-biphenyl]-4,4'-disulfonate (9CI)  
 (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 47H-22,26-Epoxy-25,42-(epoxy[2,5]-endo-pyranoxy)-2,5:7,10:12,15:17,20-tetraethano-30,33:34,37-diethenopyrano[2,3-n][1,12,16,18,21,23,26,28,31,33,36,2,11]undecaaxadithiacyclodotetracontin,  $\beta$ -cyclodextrin deriv.  
 MF C54 H76 O39 S2  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

DT.CA CAplus document type: Journal; Patent  
 RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)  
 RL.NP Roles from non-patents: PREP (Preparation); PRP (Properties)



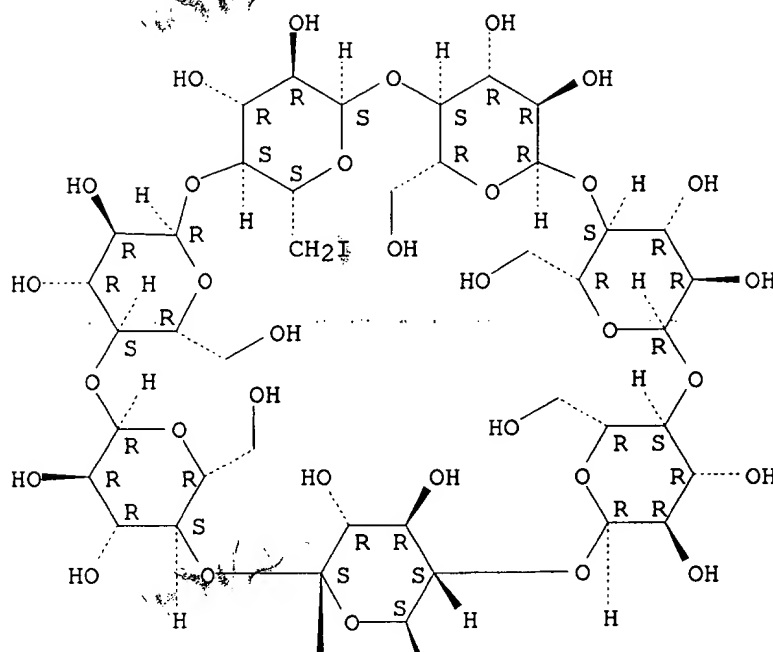
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

4 REFERENCES IN FILE CA (1907 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

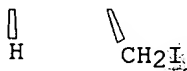
L8 ANSWER 12 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 76700-72-6 REGISTRY  
 CN  $\beta$ -Cyclodextrin, 6A,6D-dideoxy-6A,6D-diiodo- (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 2,4,7,9,12,14,17,19,22,24,27,29,32,34-Tetradecaaxaocyclo[31.2.2.23,6.28,11.213,16.218,24.223,26.228,31]nonatetracontane,  $\beta$ -cyclodextrin deriv.  
 FS STEREOSEARCH  
 MF C42 H68 I2 O33  
 LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, TOXCENTER, USPATFULL  
 (\*File contains numerically searchable property data)  
 DT.CA CAplus document type: Journal; Patent  
 RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent)  
 RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent);  
 USES (Uses)

Absolute stereochemistry.

PAGE 1-A



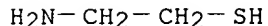
PAGE 2-A



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

24 REFERENCES IN FILE CA (1907 TO DATE)  
24 REFERENCES IN FILE CAPLUS (1907 TO DATE)

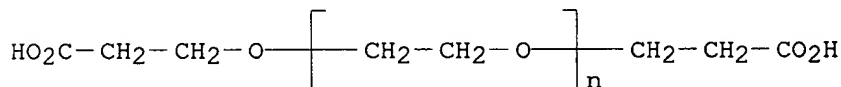
L8 ANSWER 13 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 51974-68-6 REGISTRY  
CN Ethanethiol, 2-amino-, monosodium salt (9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN Sodium 2-aminoethylmercaptide  
CN Sodium 2-aminoethylthiolate  
MF C2 H7 N S . Na  
LC STN Files: BEILSTEIN\*, CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB,  
TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)  
DT.CA Caplus document type: Journal; Patent  
RL.P Roles from patents: RACT (Reactant or reagent); USES (Uses)  
RLD.P Roles for non-specific derivatives from patents: PREP (Preparation)  
RL.NP Roles from non-patents: FORM (Formation, nonpreparative); PRP  
(Properties); RACT (Reactant or reagent)  
CRN (60-23-1)



● Na

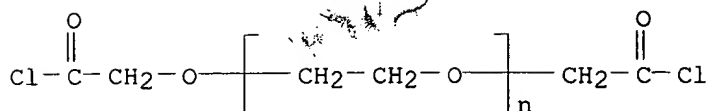
11 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 11 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 14 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 51178-68-8 REGISTRY  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-carboxyethyl)- $\omega$ -(2-carboxyethoxy)- (9CI) (CA INDEX NAME)  
 DR 173323-15-4  
 MF (C2 H4 O)<sub>n</sub> C6 H10 O5  
 CI PMS, COM  
 PCT Polyether  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL  
 DT.CA Caplus document type: Journal; Patent  
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: PREP (Preparation); USES (Uses)  
 RL.NP Roles from non-patents: RACT (Reactant or reagent); USES (Uses)



13 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 13 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 15 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 35625-91-3 REGISTRY  
 CN Poly(oxy-1,2-ethanediyl),  $\alpha$ -(2-chloro-2-oxoethyl)- $\omega$ -(2-chloro-2-oxoethoxy)- (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Polyethylene glycol bis(chloroformylmethyl) ether  
 DR 275354-47-7  
 MF (C2 H4 O)<sub>n</sub> C4 H4 Cl2 O3  
 CI PMS, COM  
 PCT Polyether  
 LC STN Files: CA, CAPLUS, CASREACT, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL  
 DT.CA Caplus document type: Journal; Patent  
 RL.P Roles from patents: BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 RLD.P Roles for non-specific derivatives from patents: BIOL (Biological study)  
 RL.NP Roles from non-patents: PREP (Preparation); RACT (Reactant or reagent)



13 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

14 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 16 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 23214-92-8 REGISTRY

CN 5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S,10S)- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 5,12-Naphthacenedione, 10-[(3-amino-2,3,6-trideoxy- $\alpha$ -L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-8-(hydroxyacetyl)-1-methoxy-, (8S-cis)-

OTHER NAMES:

CN 14-Hydroxydaunomycin

CN Caelyx

CN Doxil

CN Doxorubicin

CN NSC 123127

FS STEREOSEARCH

DR 24385-08-8, 25311-50-6, 23257-17-2, 29042-30-6

MF C27 H29 N O11

CI COM

LC STN Files: ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN\*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, DDFU, DIOGENES, DRUGU, EMBASE, HSDB\*, IFICDB, IFIPAT, IFIUDB, IMSCOSEARCH, IMSDRUGNEWS, IMSPATENTS, IMSRESEARCH, IPA, MEDLINE, MRCK\*, MSDS-OHS, NAPRALERT, NIOSHTIC, PHAR, PROMT, PROUSDDR, PS, RTECS\*, TOXCENTER, USAN, USPAT2, USPATFULL, VETU

(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Book; Conference; Dissertation; Journal; Patent; Report

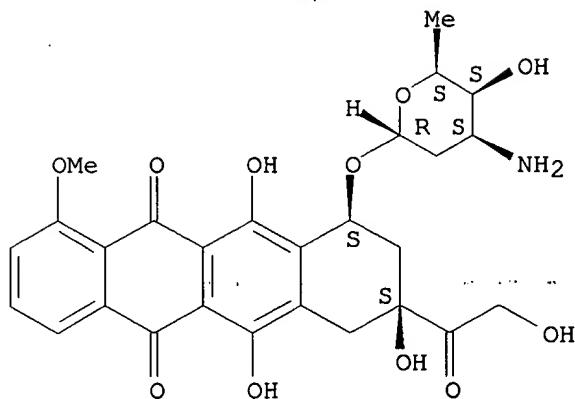
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.P Roles for non-specific derivatives from patents: ANST (Analytical study); BIOL (Biological study); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological study); FORM (Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical study); BIOL (Biological study); CMBI (Combinatorial study); FORM (Formation, nonpreparative); OCCU (Occurrence); PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses)

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

13680 REFERENCES IN FILE CA (1907 TO DATE)

934 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

13718 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L8 ANSWER 17 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN

RN 7585-39-9 REGISTRY

CN  $\beta$ -Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 2,4,7,9,12,14,17,19,22,24,27,29,32,34-Tetradecaaxaocyclo[31.2.2.23,6.28,11.213,16.218,21.223,26.228,31]nonatetracontane,  $\beta$ -cyclodextrin deriv.

CN Cycloheptaamylose (7CI)

OTHER NAMES:

CN  $\beta$ -CycloamyloseCN  $\beta$ -CycloheptaamyloseCN  $\beta$ -Dextrin

CN Betadex

CN BW 7

CN BW 7 (polysaccharide)

CN Cavamax W 7

CN Celdex B 100

CN Celdex N

CN Cycloheptaglucan

CN Cycloheptaglucosan

CN Cyclomaltoheptaose

CN Dextrin,  $\beta$ -cyclo

CN Kleptose

CN Kleptose B

CN NSC 269471

CN NSC 314334

CN Rhodocap N

CN Ringdex B

CN Ringdex BL

CN Schardinger  $\beta$ -dextrin

CN Stereoisomer of 5,10,15,20,25,30,35-heptakis(hydroxymethyl)-



2,4,7,9,12,14,17,19,22,24,27,29,32,34-tetradeca-octa-cyclo[31.2.2.23,6.28,  
11.213,16.218,21.223,26.228,31]nonatetracontane-  
36,37,38,39,40,41,42,43,44,45,46,47,48,49-tetradecol

FS STEREOSEARCH

DR 449728-55-6, 37331-89-8, 47918-72-9

MF C42 H70 O35

CI COM

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN\*, BIOBUSINESS, BIOSIS,  
BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,  
CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM\*, DRUGU, EMBASE,  
GMELIN\*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, NAPRALERT, NIOSHTIC,  
PIRA, PROMT, PS, RTECS\*, TOXCENTER, USAN, USPAT2, USPATFULL, VETU, VTB  
(\*File contains numerically searchable property data)

Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*, WHO

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

DT.CA Caplus document type: Conference; Dissertation; Journal; Patent;  
Preprint; Report

RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
CMBI (Combinatorial study); FORM (Formation, nonpreparative); MSC  
(Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC (Process);  
PRP (Properties); RACT (Reactant or reagent); USES (Uses); NORL (No role  
in record)

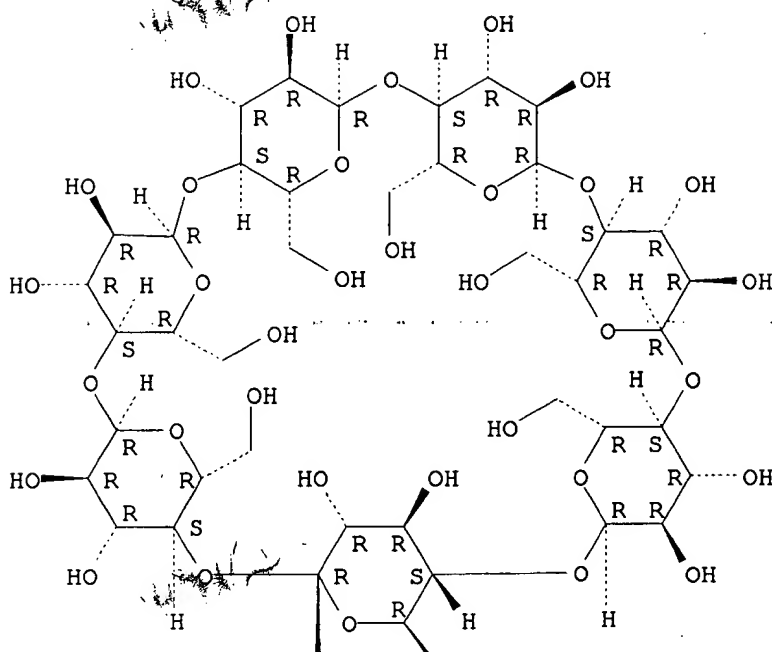
RLD.P Roles for non-specific derivatives from patents: ANST (Analytical  
study); BIOL (Biological study); CMBI (Combinatorial study); FORM  
(Formation, nonpreparative); PREP (Preparation); PROC (Process); PRP  
(Properties); RACT (Reactant or reagent); USES (Uses)

RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological  
study); CMBI (Combinatorial study); FORM (Formation, nonpreparative);  
MSC (Miscellaneous); OCCU (Occurrence); PREP (Preparation); PROC  
(Process); PRP (Properties); RACT (Reactant or reagent); USES (Uses);  
NORL (No role in record)

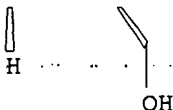
RLD.NP Roles for non-specific derivatives from non-patents: ANST (Analytical  
study); BIOL (Biological study); CMBI (Combinatorial study); FORM  
(Formation, nonpreparative); MSC (Miscellaneous); OCCU (Occurrence);  
PREP (Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

11496 REFERENCES IN FILE CA (1907 TO DATE)  
 4389 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
 11541 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L8 ANSWER 18 OF 18 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 3406-84-6 REGISTRY  
 CN [1,1'-Biphenyl]-4,4'-disulfonyl dichloride (9CI) (CA INDEX NAME)  
 OTHER CA INDEX NAMES:  
 CN 4,4'-Biphenyldisulfonyl chloride (6CI, 7CI, 8CI)  
 OTHER NAMES:  
 CN 4,4'-Biphenylylenedisulfonyl chloride  
 CN 4,4'-Bis(chlorosulfonyl)biphenyl  
 CN NSC 2062  
 FS 3D CONCORD  
 MF C12 H8 Cl2 O4 S2  
 CI COM  
 LC STN Files: BEILSTEIN\*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,

CHEMINFORMRX, CHEMLIST, CSCHEM, HODOC\*, IFICDB, IFIPAT, IFIUDB,  
MSDS-OHS, SPECINFO, TOXCENTER, USPAT2, USPATFULL

(\*File contains numerically searchable property data)

Other Sources: EINECS\*\*, NDSL\*\*, TSCA\*\*

(\*\*Enter CHEMLIST File for up-to-date regulatory information)

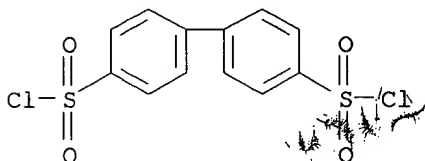
DT.CA CAplus document type: Journal; Patent

RL.P Roles from patents: PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses); NORL (No role in record)

RLD.P Roles for non-specific derivatives from patents: PREP (Preparation);  
USES (Uses)

RL.NP Roles from non-patents: FORM (Formation, nonpreparative); PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses); NORL (No role in record)

RLD.NP Roles for non-specific derivatives from non-patents: RACT (Reactant or  
reagent)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

122 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

123 REFERENCES IN FILE CAPLUS (1907 TO DATE)

11 REFERENCES IN FILE CAOLD (PRIOR TO 1967)